

More evidence that Alzheimer's disease may be inherited from your mother

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Results from a new study contribute to growing evidence that if one of your parents has Alzheimer's disease, the chances of inheriting it from your mother are higher than from your father. The study is published in the March 1, 2011, print issue of *Neurology*, the medical journal of the American Academy of Neurology.

"It is estimated that people who have first-degree relatives with Alzheimer's disease are four to 10 times more likely to develop the disease themselves compared to people with no family history," said study author Robyn Honea, DPhil, of the University of Kansas School of Medicine in Kansas City.

For the study, 53 dementia-free people age 60 and over were followed for two years. Eleven participants reported having a mother with Alzheimer's disease, 10 had a father with Alzheimer's disease and 32 had no history of the disease in their family. The groups were given [brain scans](#) and [cognitive tests](#) throughout the study.

The researchers found that people with a mother who had Alzheimer's disease had twice as much [gray matter](#) shrinkage as the groups who had a father or no parent with Alzheimer's disease. In addition, those who had a mother with Alzheimer's disease had about one and a half times more whole brain shrinkage per year compared to those who had a father with the disease. Shrinking of the brain, or [brain atrophy](#), occurs in Alzheimer's disease.

"Using 3-D mapping methods, we were able to look at the different regions of the brain affected in people with maternal or paternal ties to Alzheimer's disease," said Honea. "In people with a maternal family history of the disease, we found differences in the break-down processes in specific areas of the brain that are also affected by [Alzheimer's disease](#), leading to shrinkage. Understanding how the disease may be inherited could lead to better prevention and treatment strategies."

Provided by American Academy of Neurology

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